

**Uncertainties Facing the
Customer Communications 2002 Project
May Jeopardize Its Timely Deployment**

September 2001

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DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

INSPECTOR GENERAL
for TAX
ADMINISTRATION

September 25, 2001

MEMORANDUM FOR DEPUTY COMMISSIONER FOR MODERNIZATION &
CHIEF INFORMATION OFFICER

Pamela J. Gardiner

FROM: Pamela J. Gardiner
Deputy Inspector General for Audit

SUBJECT: Final Audit Report – Uncertainties Facing the Customer
Communications 2002 Project May Jeopardize Its Timely
Deployment

This report presents the results of our review of the Internal Revenue Service's (IRS) development of the Customer Communications 2002 (CC 2002) modernization project. This is one of a series of reviews designed to assess the overall effectiveness of the IRS' systems modernization efforts. The objective of this review was to determine whether the IRS' expectations of delivering enhanced telephone and Internet services to taxpayers for the 2002 filing season were achievable.

In summary, we found that uncertainties in the CC 2002 project's design and development processes jeopardize the IRS' ability to provide additional taxpayer benefits in the 2002 filing season. We recommended the IRS consider taking a more cautious approach for the project's development, testing, and deployment. If the conditions and delays now facing the project cannot be overcome in the near future, the IRS should consider delaying the deployment of the project until after the 2002 filing season.

Management's Response

Business Systems Modernization Office (BSMO) management requested an extension to respond to our draft report from August 29, 2001, to September 7, 2001. As of September 20, 2001, management had not responded to the draft report.

Copies of this report are also being sent to managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions or

Scott E. Wilson, Assistant Inspector General for Audit (Information Systems Programs),
at (202) 622-8510.

Uncertainties Facing the Customer Communications 2002 Project May Jeopardize Its Timely Deployment



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Uncertainties in the Customer Communications 2002 Project May Jeopardize Its Timely Deployment September 2001



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Presentation Overview

- Introduction
 - Audit Objective
 - Summary of Review
 - Background
 - Scope of Review
 - Methodology
 - Results
-

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Introduction

- The Customer Communications (CC) 2002 project builds on the work started by the IRS and Computer Sciences Corporation (CSC) in 2000 to increase telephone and communication service levels to taxpayers comparable to those of similar customer service operations in the private sector.
- The CC 2002 project emerged as a separate release in March 2000 when the IRS acknowledged that it could not deliver all planned Customer Communication capabilities in 2001.

CC 2002 Project

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Introduction

The CC 2002 project has planned capabilities to:

- Allow a taxpayer via the Internet to determine when his/her refund will be issued and if his/her tax return was received by the IRS, known as fact-of-filing (IR/FOF).
- Automatically route taxpayer calls based on the nature of the call and account information (Data Directed Routing-DDR) to a knowledgeable IRS employee to handle the taxpayer's question.

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Audit Objective

- To determine whether the IRS' expectations of delivering Customer Communication benefits to taxpayers for the 2002 tax filing season were achievable.

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Summary of Review

- The delay in finalizing a performance-based contract, the use of a new development methodology, and dependencies on other projects jeopardizes the IRS' ability to provide intended taxpayer benefits for the 2002 filing season.
- Recognizing these uncertainties, in June 2001, the IRS revised its approach to increase the chance of delivering some of the planned taxpayer benefits in time for the 2002 filing season. The IRS still plans to deliver the IR/FOF in January 2002, but postponed DDR capabilities until May 2002.

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Background

- In March 2000, the IRS submitted its second Information Technology Investment Account (ITIA) expenditure plan for business systems modernization to the Congress.
 - This plan limited the CC 2001 project capabilities to telephone call center operation improvements.
 - The IRS moved the improved call routing, automated self-service, and Internet refund and fact of filing confirmation capabilities to the CC 2002 project.

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Background

- In November 2000, the IRS reprioritized the CC 2002 project capabilities and asked the CSC to modify the project's design work.
 - For the 2002 filing season, the revised CC 2002 project planned to deliver IR/FOF and DDR.
- The IRS postponed the following capabilities until 2003:
 - Centralized systems management and administration.
 - Centralized management information system.

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Background

- We previously reported that the CSC and IRS project teams did not timely complete critical work products on earlier projects, including CC 2001.
- We also reported that project managers did not build reserves and recovery time into work schedules to allow for the impact of unplanned events on project delivery.
- In March 2001, we cautioned the CIO that if lessons learned in earlier projects were not applied to CC 2002, the IRS would find it difficult to attain its goal of implementing repeatable processes for designing, developing, and deploying modernized systems.

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Scope of Review

- Evaluated the CC 2002 project's design phase and a portion of the development phase.
- Audit conducted at National Headquarters' Business Systems Modernization Office (BSMO) and at CSC offices between March 8, and June 8, 2001.
- Audit conducted in accordance with *Government Auditing Standards*.

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Methodology

- Interviewed IRS and CSC managers and project staff.
- Reviewed supporting project documentation and project work schedules.
- Attended the April 2001 Program Management Review meeting.
- Relied on information and documentation obtained by the BSMO from the CSC to complete some audit tests.

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Results

- There are three significant issues that could affect the project team's ability to meet the 2002 filing season expectations.
 - After 9 months of negotiations, the IRS and CSC could not finalize a performance-based contract for project design and development.
 - The project team is using a new design and development methodology for the IR/FOF and DDR.
 - Multiple dependencies on other projects and IRS processes put the CC 2002 project schedule at risk.

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Results

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The IRS and CSC Could Not Finalize a Performance-Based Contract

- The IRS issued a preliminary contract to the CSC to begin work on the CC 2002 project design and development.
 - The IRS pays CSC for hours worked (level of effort) until the contract is finalized.
 - Performance-based contracts define specific deliverables and costs, include standards to measure performance, and provide appropriate incentives and disincentives.

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Results

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- After 9 months of negotiations and three proposals, the IRS and the CSC could not finalize a contract.
- As a result, the CSC will continue to perform the design and development work under the preliminary contract until the contract is finalized.
 - This affects the ability of the IRS to hold the CSC responsible for delivery of specific products, since payments are based on hours worked, not products delivered.

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Results

- The third ITIA expenditure plan included \$14.2 million for this preliminary contract.
 - This amount was an estimate provided by the CSC, but the estimate was not based on detailed project design or development plans.
 - The actual cost of design work could vary significantly from this estimate.

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Management's Action:

Management's Action

On July 10, 2001, BSMO management stated that it is working towards a performance-based contract for the remaining design and development activities.

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Recommendation

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Recommendation

1. The IRS needs to formalize the performance-based contract with CSC before exiting the design phase of CC 2002.
 - A timely completed performance-based contract benefits the IRS by providing a detailed project schedule and clearly defining IRS and CSC responsibilities for all work products.

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Management's Response

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Management's Response

1. BSMO management requested an extension to respond to our draft report from August 29, 2001 to September 7, 2001. As of September 20, 2001, management had not responded to the draft report.

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Results

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The Project Team is Using a New Design and Development Methodology

- The CSC selected a rapid application delivery methodology, Catalyst 4D (C4D), for the IR/FOF and DDR.
- C4D was recently added to the Enterprise Life Cycle (ELC), the comprehensive process used to guide systems development projects from beginning to end.
- We have concerns about using this methodology on the CC 2002 project.

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Results

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C4D Concerns

- To use C4D, the ELC states the project team must consist of business systems and technical architects that have demonstrated prior ability to use C4D successfully.
 - While the project team coach was one of the C4D authors, the project team members have not participated in taking a system from design through implementation using C4D.

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Results

- The ELC guide to the C4D states that C4D should only be used when commercial application software that is compatible with existing systems applications is available.
- The guide stresses that not having this software would preclude using C4D.
 - The CC 2002 project team plans to custom build application software rather than use commercially available software.

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Results

- The ELC states that C4D can be an effective methodology for developing Internet-based applications, such as IR/FOF.
- During our review, the CSC Project Director stated that C4D is not a natural fit for telephone-based applications, such as DDR.
 - However, the CSC plans to use C4D for DDR, and started to revise the methodology by adding additional project activities and tasks, and removing others.

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Results

- The project team did not benchmark other similar Internet applications to identify “best practices”.
 - The C4D methodology suggests that project teams review similar existing Internet applications to identify visual design, usability, functionality, content, business model, and business impact.
 - An example would be state government Internet sites that offer refund and fact-of-filing information.

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Management's Action

Management's Action

On July 10, 2001, the CSC Project Director stated that the project team has since identified and reviewed several similar Internet sites operated by state governments.

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Recommendation

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Recommendation

2. The IRS should reconsider the use of the C4D methodology to develop, test, and deploy the IR/FOF and DDR. If the IRS continues to move forward with using the C4D, the following barriers need to be addressed.
 - The inexperience of project team members in using C4D.
 - Additional costs and time added to the project by custom building the software application.

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Results

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Dependencies on Other Projects Puts the CC 2002 Work Schedule at Risk

- The IR/FOF application has a direct dependency on the Security Technology and Infrastructure Release (STIR) project because access to taxpayer information via the Internet must be secure.
 - STIR availability is scheduled for January 2, 2002, which corresponds with the CC 2002 deployment date.
 - STIR needs to resolve significant architectural and engineering issues which could delay deployment.

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Results

- The aggressiveness of the CC 2002 schedule puts the planned deployment date at risk.
 - Both IR/FOF and DDR require access to taxpayer data.
 - The CSC planned to deliver a draft proposal for processes to access taxpayer data and warehouse the data in June 2001.
 - The CC 2002 project team planned to start writing programs to access this data in July 2001.

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Results

- CC 2002 deployment assumes that the network prompter and call screener portions of CC 2001 are working.
 - As of June 2001, the network prompter was not fully operational.
- Deploying applications during the filing season limits available time for recovery from unplanned events or problems.

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Results

- As of June 2001, several major project tasks were significantly behind schedule.
 - If these delays cannot be overcome, deployment may not occur until March 2002 or later.
 - Any problems with CC 2002 applications could be magnified because of the filing season scrutiny by the Congress, oversight groups, and the media.

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Recommendations

Recommendations

3. The IRS should evaluate the project status and dependencies on other projects, and build realistic recovery time into the work schedule to minimize the impact of delays.
4. If delays cannot be made up in the very near future, the IRS should consider postponing CC 2002 deployment until after the filing season.
 - The earlier this decision is made, the more time the IRS' business units will have to plan and devote resources to meet taxpayer needs not filled by CC 2002.

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Appendix I

Major Contributors to This Report

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Appendix II

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